FMC Alkali Chemicals

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ALKALI PRODUCTS FOR DETERGENTS

Soda ash, or **sodium carbonate**, is widely used in the cleaning compounds industry. Soda ash grades vary in density and absorptivity. Grade choice depends on the detergent manufacturing process to be used and the surfactant level desired. Soda ash has several functions in powder detergent products. It is a good source of alkalinity, a carrier of surfactants and dyes and an effective precipitating builder for removing hardness ions from water. In the detergent manufacturing process, soda ash aids agglomeration and may be used to neutralize the acid form of anionic surfactants. Soda ash can also be hydrated to carry water as an inexpensive filler and to enhance the storage and dissolving properties of the detergent.

FMC manufactures several **sodium carbonate** products including dense soda ash, **Grade 100™** (light soda ash), and **AbsorptaPlus™**. Grade 100 is a standard in I&I formulating due to its absorptive properties and ideal bulk density. AbsorptaPlus is a light soda ash with increased absorptivity and advanced processing characteristics beyond that of other light soda ash. FMC designed this product with the I&I formulator in mind.

Chemically, **Sesqui™ sodium sesquicarbonate** is a double salt of sodium carbonate and sodium bicarbonate with water of hydration. Sesqui has the appearance of brilliant white, translucent crystals and is non-caking, dust-free and free-flowing. Sesqui is a mild alkali with very good water softening and buffering properties.

Sodium bicarbonate is a very mild alkali with very good buffering properties. It can be tabletized to form effervescent products and is a source of buffered mild alkalinity for cleaning compounds.

All of the carbonates can be used as an economic source of alkalinity, buffering agent or water conditioner in mildly concentrated liquid formulations.

GENERAL PROPERTIES OF ALKALI PRODUCTS	SODIUM CARBONATE	SODIUM SESQUICARBONATE	SODIUM BICARBONATE
pH (1% Solution)	11.4	9.9	8.3
Water Conditioner via Precipitation	excellent	excellent	excellent
Saponification	good	moderate	NA
Alkalinity, %Na_2O	59	41	37

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